

6.10 Northern Spruce-Fir-(Hardwood) Forests

Abies balsamea - *Betula papyrifera* / *Diervilla lonicera* Forest (Balsam Fir - Paper Birch Forest)

COMMON NAME	Balsam Fir - Paper Birch / Bush-honeysuckle Forest
SYNONYM	Balsam Fir - Paper Birch Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Evergreen forest (I.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen forest (I.A.8)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (I.A.8.N)
FORMATION	Conical-crowned temperate or subpolar needle-leaved evergreen forest (I.A.8.N.c)
ALLIANCE	PICEA GLAUCA - ABIES BALSAMEA FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Voyageurs National Park

This type was not tracked separately at Voyageurs, so its range is not clear.

Globally

This community is found in northern Minnesota, northwestern Ontario, and southeastern Manitoba.

ENVIRONMENTAL DESCRIPTION

Voyageurs National Park

Globally

This community is found on deep, moist to mesic, mineral soils, usually loams (Sims *et al.* 1989). It can be on flat to moderate slopes (5-30%) and, in northern Minnesota, tends to be near water (Ohmann and Ream 1971).

MOST ABUNDANT SPECIES

Voyageurs National Park

Globally

Stratum

Tree canopy

Species

Abies balsamea, *Betula papyrifera*

CHARACTERISTIC SPECIES

Voyageurs National Park

Globally

Abies balsamea, *Betula papyrifera*

VEGETATION DESCRIPTION

Voyageurs National Park

This type was not described separately at Voyageurs National Park.

Globally

Canopy is either pure evergreen or mixed evergreen-deciduous. The overstory is usually dominated by *Abies balsamea* and *Betula papyrifera* but some stands may have large amounts of *Populus tremuloides*. Other common trees include *Picea glauca*, *Picea mariana*, *Pinus strobus*, and *Thuja occidentalis*. Canopy trees may typically be 15-25 m tall (Hansen *et al.* 1973). *Abies balsamea* is also abundant in the sapling/shrub stratum, along with *Acer spicatum*, *Betula papyrifera*, *Diervilla lonicera*, *Corylus cornuta*, *Linnaea borealis*, *Rubus pubescens*, *Sorbus americana*, and *Taxus canadensis* (especially on Isle Royale and in northern Wisconsin). Herbaceous species found in this community include *Anemone quinquefolia*, *Aralia nudicaulis*, *Aster macrophyllus*, *Clintonia borealis*, *Coptis trifolia*, *Cornus canadensis*, *Maianthemum canadense*, *Mitella nuda*, *Streptopus roseus*, and *Trientalis borealis*.

USGS-NPS Vegetation Mapping Program
Voyageurs National Park

Mosses include *Hylocomium splendens*, *Plagiomnium cuspidatum*, *Pleurozium schreberi*, and *Ptilium crista-castrensis* (Sims *et al.* 1989).

CONSERVATION RANK G5.

DATABASE CODE Cegl002474

COMMENTS

Voyageurs National Park

This evergreen type was not described separately at Voyageurs National Park. See global description for the Fir-birch type (CEGL002474). Stands are typically mapped as part of the Spruce-Fir/Mountain Maple type (CEGL002446) or the Spruce-Fir-Aspen type (CEGL002475).

Globally

Diervilla lonicera may not be abundant in all stands. Hansen *et al.* (1973) found very little on their stands on Isle Royale in Lake Superior.

Stands may often have high tree mortality of *Abies balsamea* because of spruce budworm outbreaks. These stands are described by Ohmann and Ream (1971) as a separate "budworm-disturbed" type, but Grigal and Ohmann (1975) found that floristically these stands belong with the "Fir-birch" type.

REFERENCES

- Grigal, D. F. and L. F. Ohmann. 1975. Classification, description, and dynamics of upland plant communities within a Minnesota wilderness area. *Ecol. Monogr.* 45:389-407.
- Hansen, H. L., L. W. Krefting, and V. Kurmis. 1974. The forest of Isle Royale in relation to fire history and wildlife. University of Minnesota, Agricultural Exper. Station, Tech. Bull. 294, Forestry Series 13.
- Ohmann, L. F. and R. R. Ream. 1971. Wilderness ecology: virgin plant communities of the Boundary Waters Canoe Area. Res. Pap. NC-63. St. Paul, MN.: U.S. Dept. of Agr., For. Service, North Central Exper. Sta. 55 pp.
- Sims, R. A., W. D. Towill, K. A. Baldwin, and G. M. Wickware. 1989. Field guide to the forest ecosystem classification for northwestern Ontario. Ontario Ministry of Natural Resources.